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APPENDIX I
Marked-up Version of Amended Claims

1. (three times amended) [In an MPEG information distribution system, a method for forming a transport stream having a bitrate BR and including one or more programs, said method comprising the steps of:

defining N slots within said transport stream, where N is an integer greater than one, each of said N slots being associated with a respective plurality of non-contiguous transport packets, each of said respective non-contiguous transport packets being separated by N-1 transport packets;

including, within said transport stream being formed, up to N transport encoded programs, where each transport encoded program is associated with one of said N slots and has a bitrate of BR/N; and

in the case of less than N transport encoded programs being included within said transport stream being formed, including NULL transport packets within said transport stream being formed, said NULL packets forming NULL programs within said transport stream being formed] A method for processing a transport stream comprising a plurality of time slots for transporting therein respective programs having a common time base indicated by a periodically inserted time stamp, said method comprising:

modifying packets associated with a desired time slot of a received transport stream to produce an output transport stream; and

transmitting said output transport stream; wherein

said transmitted output transport stream includes the same periodically inserted time stamp provided by said received transport stream.

2. (twice amended) The method of claim 1, wherein said modifying comprises replacing said packets associated with said desired time slot [including NULL transport packets within said transport stream being formed comprises the steps of:

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(1) examining a packet received from said transport stream to determine if said received packet comprises a NULL packet;

(2) inserting, into an output transport stream, a replacement packet if said received packet does comprise a NULL packet; and

(3) inserting, into said output transport stream, said received packet if said received packet does not comprise a NULL packet].

3. (twice amended) The method of claim 2, wherein initial and replacement packets associated with said desired time slot represent respective first and second programs [said replacement packet is only inserted into said output transport stream if a timing condition is satisfied].

5. (amended) The method of claim [4] 3, wherein one of said first and second programs [replacement program] comprises a NULL program.

6. (amended) The method of claim [4] 3, wherein the step of [replacing said one or more programs] modifying packets further comprises [the steps of]:

(1) examining a packet received from said received transport stream to determine if a slot associated with said received packet corresponds to an insertion slot for said second program to be inserted;

(2) inserting, into an output transport stream, a next packet of said second [replacement] program if said slot associated with said received packet corresponds to an insertion slot for said second program to be inserted;

(3) inserting, into said output transport stream, said received packet if said slot associated with said received packet does not correspond to an insertion slot for said second program to be inserted; and

(4) repeating steps (1) through (3) for each packet of said received transport stream until a replacement stream has been fully inserted into said output transport stream.

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7. (twice amended) An apparatus for [generating N programs, where N is an integer greater than one, to produce a slotted transport stream respectively having N slots,] processing a transport stream comprising N time slots for transporting therein N respective programs having a common time base indicated by a periodically inserted time stamp, said apparatus comprising:

a transport clock source CLK;

[N transport encoders for respectively receiving said N programs and producing N program streams;]

a frequency divider [coupled between the transport clock source and the respective N transport encoders to divide] for dividing a timing signal CLK from said transport clock source into N timing signals; [and]

N transport encoders coupled to said frequency divider for respectively receiving and encoding said N programs; and

a multiplexer, coupled to an output of said N transport encoders, for receiving and modifying packets associated with a desired time slot of one or more transport encoded program streams, said multiplexer producing a processed transport stream, wherein said processed transport stream includes the same periodically inserted time stamp provided by said received transport stream [sequentially multiplexing one transport packet from each respective transport encoded program streams to form the slotted transport stream, wherein each transport packet from a single program stream is separated by N-1 transport packets].

10. (amended) The apparatus of claim 7, wherein [a NULL program is inserted into every N-1 slot in the slotted transport stream where such slot is not associated with a program] said modifying comprises replacing said packets associated with said desired time slot.

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12. (amended) Apparatus for [generating a transport stream comprising a plurality of programs, each of said programs having associated with it a respective time slot, than one, to produce a slotted transport stream respectively having N slots,] processing a transport stream comprising a plurality of time slots for transporting therein a respective plurality of programs having a common time base indicated by a periodically inserted time stamp, said apparatus comprising:

a transport clock source;

a frequency divider, for dividing a transport clock timing signal from said transport clock source into a plurality of timing signals; and

a plurality of encoders, each of said encoders coupled to said frequency divider for respectively receiving and encoding said plurality of programs [encoding a program stream in response to a respective timing signal] to produce a respective encoded program stream, each of said encoded program streams being coupled to a switch via a respective buffer memory;

said switch selectively coupling program stream transport packets from said buffer memories for modifying packets associated with a desired time slot to produce a slotted transport stream, wherein said slotted transport stream includes the same periodically inserted time stamp provided by said received transport stream [each transport packet of each program stream is separated by a transport packet from at least one other program stream].

17. (amended) The apparatus of claim 16, wherein an identification of the time slot includes [including] said requested program stream provided to said requesting subscriber.

18. (amended) The apparatus of claim 12, wherein a bitrate of an encoded transport stream is adapted by adding NULL packets to the [transport encoded] slotted transport stream.

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21. (amended) The method of claim 1, further comprising:
storing, in a file server, at least one transport encoded [programs] program;
and
in response to a subscriber request for a transport encoded program, including
said requested transport encoded program within a respective time slot of said output
transport stream being formed.
23. (amended) The method of claim 1, [further comprising:
adjusting a bitrate of a transport encoded program stream by performing at
least one of adding NULL packets to the transport encoded program and deleting
program packets from the transport encoded program] wherein a bitrate of said output
transport stream is adjusted by deleting program packets and inserting NULL
transport packets within said processed output transport stream.